Remarks

Claims 1-4, 7-12 and 21 are pending. Claims 9-11 have been withdrawn from consideration.

§ 112 Rejections

Claims 1-4, 7, 8 and 12 stand rejected under 35 USC § 112, first paragraph, as purportedly failing to comply with the written description requirement. The Patent Office asserts that there is no support for the composition being "substantially free of polyepoxide resin." Applicants respectfully traverse.

In order to fulfill the written description requirement, "the applicant must ... convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*." Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991).

The present invention provides screen-printable adhesive compositions capable of being applied at room temperature. In order to be suitable for screen printing it is desirable to control both the yield point and viscosity of the composition. (Page 7, lines 3-4.) As discussed below, at least two distinct embodiments of screen-printable adhesives are described.

Applicants are currently claiming a screen-printable adhesive composition capable of being applied to a substrate at room temperature comprising the following components:

(a) 25 to 100 parts by weight of at least one alkyl acrylate monomer;

(b) 0 to 75 parts by weight of at least one reinforcing comonomer; and

(c) an effective amount of a core-shell polymer to provide a screen-printable composition;

wherein said composition and components are substantially solvent free, and substantially free of polyepoxide resin. (See, e.g., claim 1.)

Applicants respectfully submit that the claim limitation "substantially free of polyepoxide resin," upon which the Patent Office has based this rejection, is properly characterized as a negative limitation or exclusionary proviso. Applicants further submit that there is nothing

inherently ambiguous or uncertain about a negative limitation. (See, e.g., MPEP § 2173.05(i).) Finally, Applicants submit that "[i]f alternative elements are positively recited in the specification, they may be explicitly excluded in the claims." (*Id.*, citing In re Johnson, 558 F.2d, 1008, 1019 (CCPA 1977).)

As stated, the present application describes at least two embodiments of a room temperature applicable, screen-printable composition. First, as described on page 3, lines 8-17, one embodiment of a screen-printable adhesive of the present invention comprises at least one alkyl acrylate monomer, from 25-150 parts polyepoxide resin, and a heat-activatable polyepoxide resin curing agent. (See also page 9, lines 21-22; describing screen-printable adhesive compositions containing polyepoxide resin as but one embodiment of the present invention.) As described, the polyepoxide resin is used in an effective amount to provide a screen-printable viscosity (at room temperature) with little or no stringing. (Page 10, lines 7-9.)

Second, the specification describes, as a separate embodiment, screen-printable adhesive compositions containing at least one alkyl acrylate monomer and an effective amount of a core-shell polymer. (See, e.g., page 3, lines 18-27; page 12, lines 6-8; and claim 1.) Like the polyepoxide resin, the core-shell polymers are added in an amount to provide a viscosity and yield stress suitable for screen printing. (Page 12, lines 16-18.) Thus, Applicants respectfully submit that, for some embodiments, the polyepoxide resin and the core-shell polymers are "alternative elements" that are positively recited, and thus either may be explicitly excluded. (See, MPEP § 2173.05(i).)

The Patent Office has cited several portions of the application that set forth the presence of a polyepoxide. Form these passages, the Patent Office concludes that the express exclusion of a material specifically deemed to be suitable in the description, calls into question what other materials are within the realm of the claims when not explicitly precluded by claim language. (Office Action mailed July 29, 2004 (hereinafter OA 29July04), ¶ 3.) Applicants respectfully submit that this position is contrary to current legal precedent, which permits the explicit exclusion of positively recited alternative elements. However, these passages will be discussed *seriatim*.

Page 3, line 2

Applicants believe the Patent Office intended to cite Page 3, line 12, as line 2 does not refer to polyepoxide. If this is incorrect, appropriate correction and an extension of time for further reply is respectfully requested.

Although line 12 recites the term "polyepoxide resin," this recitation must be read in the context of page 3, lines 8-27. Line 12 is part of the description of one aspect of the invention, an aspect that does not expressly include core-shell polymer. (See Page 3, lines 8-17.) Page 3, lines 18-27 describes "another aspect" of the present invention, which is identical to that described at lines 8-17 except that it includes core-shell polymer and does not recite polyepoxide resin. Thus, Applicants respectfully submit that this portion of the application supports the contention that, in some embodiments, polyepoxide resin and core-shell polymers are alternative elements.

Page 9, lines 21-22

Lines 21-22 recite "[a]nother embodiment of the screen-printable adhesive compositions of the present invention contains a polyepoxide resin or a mixture of polyepoxide resins." As is clearly indicated by the language of this passage, polyepoxide resins need only be present in some embodiments of the present invention, and are not described, taught, or suggested to be an essential element of the invention.

Page 17, line 28

Although line 28 mentions polyepoxide resin, Applicants respectfully submit that the full text of page 17, lines 26-30 clearly describes to one of ordinary skill in the relevant art that embodiments of screen printable adhesives of the present invention may contain either (1) a polyepoxide resin, or (2) core-shell polymer(s). Applicants respectfully submit that it would be clear to one of ordinary skill in the art that, as of the filing date of the present disclosure, Applicants were in possession of adhesive compositions containing core-shell polymer that were substantially free of polyepoxide resin. Applicants further submit that this passage supports the contention that, for some embodiments, polyepoxide resin and core-shell polymers are positively recited as alternative elements.

Page 46, lines 1-2

This passage merely describes a commercially available polyepoxide resin, and fails to describe, teach, or suggest that such a resin cannot be excluded from some embodiments of the present invention.

Page 47, Table 5

Table 5 includes three examples (e.g., Examples 27, 28, and 29). Examples 27 and 28 exemplify one embodiment of the present invention, and contain polyepoxide resin, but no core-shell polymer. Example 29 exemplifies another embodiment of the present invention, and contains both polyepoxide resin and core-shell polymer. In addition to these examples cited by the Patent Office, Applicants direct the Patent Office's attention to Examples 25 and 26, which exemplify a third embodiment of the present invention, and contain core-shell polymer, but no polyepoxide. (Page 36, lines 1-14.) As these examples clearly demonstrate, Applicants have reduced to practice at least three distinct approaches to providing a screen-printable adhesive composition. (Note, e.g., yield point and viscosity data.) Applicants further submit that Examples 25 and 26 clearly describe an actual reduction to practice of a composition that meets all of the limitations of the claim 1. Thus, claim 1 fully meets the written description requirements of 35 USC § 112, first paragraph. (See, generally, MPEP § 2163.)

In summary, Applicants submit that polyepoxide resin and core-shell polymers are clearly described as alternative elements for some embodiments of the present invention, and thus the written description requirement for the proviso excluding polyepoxide resin is satisfied. In addition, Applicants submit that at least Examples 25 and 26 adequately describe a reduction to practice of the invention of claim 1. For at least these reasons, the rejection of claims 1-4, 7, 8 and 12 under 35 USC § 112, first paragraph, is unwarranted, and the rejection should be withdrawn.

§ 102 & § 103 Rejections

Claims 1-4, 7 and 8 stand rejected under 35 USC § 102(b) as purportedly being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as purportedly obvious over Japanese Patent No. 3-220217 (JP '217).

"All words in a claim must be considered in judging that patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385 (CCPA 1970). Furthermore, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981 (CCPA 1974). (See also MPEP § 2143.03.)

Claim 1 requires a core-shell polymer. As described in Applicants' specification, and as is well known to those of ordinary skill in the relevant art, core-shell polymers "are polymeric particles which have elastomeric or rubbery cores that are substantially surrounded by a shell material that is typically a thermoplastic polymer." (Page 12, lines 8-10. See also Encyclopedia of Polymer Science and Engineering, John Wiley & Sons, Inc., Vol. 9, p. 769 (1987); Thermoplastic Polymer Additives: Theory and Practice, Lutz, J.T., ed., Marcel Denker, Inc., pp. 224-227 (1989).)

In contrast, as acknowledged by the Patent Office, JP '217 describes a completely different class of materials, a butadiene-methyl methacrylate-styrene graft copolymer. (Office Action mailed April 22, 2004; ¶ 3, emphasis added.) Despite this explicit description in JP '217, the Patent Office relies on the common Chemical Abstracts Registry number for the graft copolymer of JP '217 and an exemplary core-shell polymer of the present invention (i.e., No. 17080-02-2) to conclude that the graft copolymer of JP '217 "is embraced" by the claimed core-shell polymer. (OA 29July04, ¶4.) Applicants respectfully submit that such an argument impermissibly ignores the claimed physical structure of a "core-shell" polymer.

JP '217 describes poly bd ACR-LC. (See, e.g., Abstract, Table 1, page 211, and Table 3, page 213.) Applicants respectfully submit that poly bd ACR-LC is not a core shell polymer, but rather a terminal-acrylated liquid polybutadiene. (See, e.g., U.S. Patent No. 4,927,739 at col.16, lines 26-28. Applicants note that JP '217 lists poly bd R-45MA in Table 1 at page 211. Applicants note that poly bd R-45MA is not a core-shell polymer. Rather, like poly bd ACR-LC, poly bd R-45MA is a diene type liquid rubber. (See, e.g., U.S. Patent No. 4,749,748 at col. 2, lines 18-31.)

For at least these reasons, the Patent Office has failed to show how JP '217 describes, teaches, or suggests a core-shell polymer, as required by the present invention. (See, e.g., claim 1.)

In summary, Applicants respectfully submit that the Patent Office has failed to show how JP '217 describes, teaches, or suggests all of the elements of the claimed invention. For at least these reasons, the rejection of claims 1-4, 7 and 8 under 35 USC § 102(b) as purportedly being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as purportedly obvious over Japanese Patent No. 3-220217 are unwarranted and should be withdrawn.

§ 103 Rejections

Claims 12 and 21 stand rejected under 35 USC § 103(a) as purportedly being unpatentable over the Japanese patent as applied to the claims hereinabove (JP '217), and further in view of PCT Publication No. WO 95/13328.

The Patent Office acknowledges that the Japanese patent abstracts do not name the claimed thixotropic agent. The Patent Office relies on the PCT publication for its purported disclosure of a pressure sensitive adhesive derived from an alkyl acrylate monomer such as ethylhexyl acrylate and a thermosetting resin wherein "the monomers may be mixed with a thixotropic agent such as fumed hydrophilic silica to achieve a coatable thickness." The Patent Office asserts it would have been obvious to mix the monomer blend of the Japanese patent with the thixotropic agent of the PCT publication in order to achieve a "coatable thickness". (Office Action mailed April 22, 2004; ¶¶ 5 and 6; rejection maintained in OA 29July04, ¶ 3.).)

While not conceding that proper motivation exists to combine the references, Applicants respectfully submit that the Patent Office has failed to show how the PCT publication overcomes the deficiencies of JP '217 referred to above. Thus, the Patent Office has failed to show how the proposed combination describes, teaches, or suggests all elements of the claimed invention.

For at least these reasons, the rejection of claims 12 and 21 under 35 USC § 103(a) as purportedly being unpatentable over Japanese Patent No. 3-220217 as applied to claims 1-4, 7, and 8 hereinabove, and further in view of PCT Publication No. WO 95/13328 is unwarranted and should be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Allowance of claims 1-4, 7, 8, 12, and 21 at an early date is solicited.

Respectfully submitted,

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Enclosures: Encyclopedia of Polymer Science and Engineering, John Wiley & Sons, Inc., Vol. 9, p. 769 (1987); and
Thermoplastic Polymer Additives: Theory and Practice, Lutz, J.T., ed., Marcel Denker, Inc., pp. 224-227 (1989).)